DISPLAY INSERT

Field of the Invention

[0001] This invention pertains to a display insert that can be inserted into a product for use as an advertising display. More specifically, the invention relates to a point-of-purchase display insert that inserts into a tire and serves as an advertising display.

Background of the Invention

[0002] Display inserts, such as those used in tires on display at a tire retailer, are used as advertising displays that can generally fit within the center of a tire to provide consumers information regarding that tire. Tire display inserts provide a more desirable aesthetic look to a tire on display by covering the center of a tire.

[0003] Tire display inserts are rather common. Generally, there are several types of displays. The most common display is a display formed from a foam core or heavy gauge styrene material. Advertising can be printed either directly onto the foam core or styrene material. Alternatively, advertising can be printed on a press sheet. The press sheet is then affixed onto the foam core or styrene material. This type of display further includes two plastic straps affixed to the back side of the foam core or styrene material. The straps attach the display to the tire and support the display within the center of the tire.

[0004] One disadvantage to this type of display is that it is costly to manufacture due to the costs of the individual components. For example, the plastic straps attached to the back side of the display are affixed with costly adhesive mounting pads that are most commonly affixed by

hand, thereby increasing the manufacturing costs. Additionally, the foamcore or heavy gauge styrene materials are relatively expensive.

[0005] Another disadvantage to this type of display is that it can only correctly fit into one specific tire size. In other words, even though this type of tire display insert can fit correctly in one tire size, it will not correctly fit in a different sized tire center. Thus, a tire insert display must be manufactured for each and every different size of tire thereby further increasing production costs.

[0006] A further disadvantage for this type of display is that while it is initially simple to setup in the tire, the way in which the display attaches to the tire often leads to failure during use. Specifically, the plastic straps affixed to the back side of the display do not provide enough tension to hold the display in place on the tire over time. Also, the display will not easily stay in proper placement in the center of the tire because of the inadequate tension created between the straps and the body material. In addition, the plastic straps may also break off due to a failure in the adhesive pads holding the straps and back side of the display together. Finally, the components may not re-attach properly if a user attempts to reattach the straps to the display.

[0007] Another type of commercially available tire display is a single piece square-shaped display formed from a single layer of styrene or twenty-four point solid bleached sulfate (SBS) material. This display is a very simple design as the corners of the square sheet of material are bent and inserted into the opening of the center of the tire so that the bent corners hold the display into place. This type of display is not aesthetically pleasing since the square shape of the

display does not cover portions of the opening on the display. Also, the square display can only fit a particular sized tire but is not suitable for tires having different sizes.

[0008] It would therefore be desirable to have a tire display having reduced manufacturing costs. It would also be advantageous to have a display that can fit correctly into the center of various tires of different sizes. It would further be advantageous to have a display that is simple to set-up while exhibiting durability by correctly staying in a proper placement in the center of the tire over a relatively long period of time.

Summary of the Invention

[0009] In one aspect, the present invention is directed to a display insert. The display insert includes a front panel section and a back panel section connected to the front panel section. The back panel section includes a plurality of tabs. The tabs can hold the display insert in the center of a tire and provides a biasing force to hold the display insert securely in place. Preferably, the display insert does not require any additional plastic straps for the securement of the display to a tire. The display insert can fit in a range of tire sizes on display.

[0010] In another aspect, the present invention is directed to a tire display having a first panel and a second panel connected to the first panel. The first and second panels are each formed from a corrugated material. Preferably, the corrugated material for each of the first and second panels includes at least one flute layer and at least one liner attached to the flute. The first panel and second panel are preferably connected in a way so that the length of the flute in the first panel is nonparallel to the length of the flute in the second panel.

[0011] In a further aspect, the present invention is directed to a tire display having a first front panel and a second back panel connected to the first front panel. The first front panel is of any geometric shape. Preferably, the first front panel is circular. The second back panel includes a plurality of tabs. The first front panel and second back panel are each formed from a corrugated material. The corrugated material for each of the first front panel and second back panel includes at least on flute and at least one liner. The flute of the first front panel is nonparallel to the second back panel. Preferably, the length of the flute of the first front panel is perpendicular to the length of the flute of the second back panel.

[0012] In yet another aspect, the present invention is directed to a tire display including a first front panel and a second rear panel connected to the first front panel. The second rear panel includes a plurality of tabs. The tabs of the second back panel are flat and generally parallel with the first front panel in an unused state, whereas the tabs of the second back panel are bent in a use state.

[0013] In a further aspect, the present invention is directed to a tire display including a first front panel and a second rear panel. The first front panel includes a liner, a flute, and a lithograph sheet. The second rear panel includes at least one flute and liner, preferably a first liner attached to one side of the flute and a second liner attached to the flute opposite the first side. The liner of the first front panel is attached to a liner from the second rear panel. The first front panel and the second rear panel are attached in such a way that the length of the flute of the first front panel is non-parallel to the length of the flute of the second back panel.

[0014] In yet a further aspect, the present invention is directed to a display insert that includes of a front panel and first and second side panels operatively connected to the front panel. The first and second side panels include tabs to secure the tire insert within the inner portion of the tire.

[0015] Still other advantages and benefits of the invention will become apparent to those skilled in the art upon a reading and understanding of the following detailed description.

Brief Description of the Drawings

[0016] The invention may take physical form in certain parts and arrangement of parts a preferred embodiment and method of which will be described in detail in this specification and illustrated in the accompanying drawings that form a part hereof, and wherein:

[0017] Figure 1 shows a plan view of the rear side of a tire display **10** in a flat, assembled orientation including a front panel section **12** attached to a back panel section **20**.

[0018] Figure 2 shows a plan view of the front panel section **12**.

[0019] Figure 3 shows a plan view the back panel section **20**.

[0020] Figures 4A – 4C show cross-sectional views of corrugated material that can be used for the display insert.

[0021] Figure 5 shows a plan view of the display insert **10** having six tabs.

[0022] Figure 6 shows a plan view of the display insert showing that the edges of the tabs are coplanar with the respective edge of the front panel section.

[0023] Figure 7 shows a front perspective view of the display insert including an optional pocket **120**.

[0024] Figure 8 shows a rear prospective view of the display insert **10** having a pocket **120** in an unassembled state.

[0025] Figure 9 shows a plan view of the display insert **10** in an unassembled state.

[0026] Figure 10 shows a rear plan view of the display insert **10** in an assembled state.

Detailed Description of the Preferred Embodiments

[0027] Referring now to the drawings wherein the drawings are for purposes of illustrating the preferred embodiments only and not for the purposes of limiting the same:

[0028] Figure 1 shows the rear side of a tire display **10** in a flat assembled position. The display **10** further includes a front panel section **12** and a back panel section **20** that is connected to the front panel section **12**. The front panel section **12** can be connected to the back panel

section **20** by any known connecting means such as adhesives and staples. Figure 2 also shows the front panel section **12**. Although Figures 1 and 2 show the front panel section **12** to be circular, it is contemplated that the front panel section **12** can be of any other geometric or non-geometric shape.

[0029] Figures 1 and 3 further illustrate the features of the back panel section **20**. The back panel section includes top edge **21**, bottom edge **23**, and side edges **22, 24**. The back panel section includes tab sections **30, 40, 50,** and **60** along the edge of the back panel section **20.** Tab section **30** is defined by bottom scored edge **31**, left side **32**, top edge **33** and right side **34**. Tab section **40** is defined by bottom scored edge **41**, left side **42**, top edge **43** and right side **44**. Tab section **50** is defined by top scored edge **51**, left side **52**, bottom edge **53** and right side **54**. Tab section **60** is defined by top scored edge **61**, left side **62**, bottom edge **63** and right side **64**. Tab sections **30, 40, 50,** and **60** can be bent along scored edges **31, 41, 51** and **61**, respectively, so that the tab sections are not parallel and at an angle to the front edge section **12** and the back edge section **20**. Tab sections **30, 40, 50** and **60** are bent in order to secure the side wall of a tire (not shown) between the front edge section **12** and the tab sections **30, 40, 50,** and **60**. Preferably, tab sections **30, 40, 50,** and **60** extend beyond the outer diameter of the front panel section **12** to further provide for the proper securement of the display **10** to the tire. Tab sections **30, 40, 50,** and **60** can increase or decrease in size if the front portion **12** increases or decreases in size.

[0030] Preferably, the edges of the tabs **30, 40, 50,** and **60** on the display **10** are coplanar with the corresponding edge of the front panel **12** so that the display could fit within a square with sides equal to the diameter of the front panel. This preferred feature allows for simpler

shipment and storage and lessens the likelihood for the possibility of damage to the display during shipment or storage. Figure 6 shows the display **10** including a front portion **12** and tab sections **30, 40, 50,** and **60**. Plane **A** shows tab sections **30** and **60** are coplanar with the left edge of the front portion **12**. Plane **B** shows tab sections **30** and **40** are coplanar with the top edge of the front portion **12**. Plane **C** shows tab sections **40** and **60** are coplanar with the right edge of the front portion **12**. Plane **D** shows tab sections **50** and **60** are coplanar with the bottom edge of the front portion **12**. Planes **A, B, C,** and **D** each have a length that is approximately equal to the diameter of the front portion **12**. Although the edges of the tabs are coplanar with the respective edges of the front portion, it is also contemplated that the tabs and edges of the front portion are not coplanar. In particular, the present display can have the edges of the tabs extending beyond the corresponding edge of the front portion or vice versa.

[0031] Even though Figures 1 and 3 show a display **10** having a total of four tab sections **30, 40, 50,** and **60,** the display may have any number of tabs. For example, the display can have three tabs, which would be useful for smaller tires. In contrast, and as shown in Figure 5, the display **10** may have six tab sections **30, 40, 50, 60, 100,** and **110** useful for larger sized tires such as truck and sport utility vehicle tires having an opening in their center 22" or larger. Tab sections **110** and **111** provide additional support for the display **10** for larger sized tires. Of course, it is contemplated that the display **10** can have number of tabs including fewer than three or greater than six in order to hold the display in place in the center of the tire.

[0032] The display insert can be formed from a variety of materials such as corrugated materials, styrene, polystyrene, solid bleached sulfate (SBS), plastic, foam core, and recycled or

unrecycled paperboard. Preferably, at least a portion of the front panel section **10** and back panel section **20** are formed from a corrugated material. Corrugated material is preferred because of its flexibility and exceptional strength-to-weight ratio properties. Also, the surface of corrugated material is suitable for printing. Corrugated material is generally formed from a paper product but can be formed from other materials including plastics. Preferably, the front panel section **10** also includes a lithograph layer that can include graphics and text that can be attached to any of the above-mentioned materials.

[0033] Figures 4A-4C show examples of different types of suitable forms of corrugated material. Figure 4A shows a particular type of corrugated material arranged in what is known as a single face **70**. The single face **70** includes one flute layer **72** and one liner layer **74** attached to the flute layer **72**. Figure 4B shows a corrugated material form known as a single wall **80**. The single wall **80** includes one flute layer **82** having a first liner layer **84** attached to the flute layer **82** and a second liner layer **86** attached to the flute layer **82** opposite the first liner layer **84**. The second liner layer **86** provides the single wall **80** with greater strength than the single face **70**. Figure 4C shows double wall **90**. The double wall **90** includes a first flute **92** and a second flute **93**. The double wall **90** also includes a first liner **94** attached to the first flute **92**. A second liner **96** is attached between the first flute **92** and second flute **93** and opposite the first liner **94** on the first flute **92**. A third liner **98** is attached to the second flute **93** opposite the second liner **96**. Although the present display can use the single face **70**, single wall **80**, or double wall **90** forms as the corrugated material, it is contemplated that any number of liners and flutes can be used in any combination. The number of flutes and liners can vary, as can the flute and/or liner sizes and thicknesses.

[0034] It is preferred that the corrugated material of the front panel section **10** and back panel section **20** be positioned in a way that the length of the flute in the corrugated material for the front panel section **10** be nonparallel to the length of the flute of the corrugated material in the back panel section **20**. More preferably, the length of the flute of the corrugated material for the front panel section **10** is approximately perpendicular to the length of the flute of the corrugated material for the back panel section **20**.

[0035] The back panel section **20** is preferably formed as a single wall **80** as shown in Figure 4B and having a flute, a first liner, and a second liner, where the first liner is attached to one side of the flute and the second liner is attached to the side of the flute opposite the first liner. It is preferred that the first liner and second liner of the back panel section are formed from the identical material having the same thickness and weight. The reason that the first liner and second liner are formed from identical material having the same thickness and weight is because to prevent curling of the back panel section that may occur over time due to differences in weight, thickness, and materials.

[0036] It is preferred that the front section **12** is formed from corrugated material having a single face **70** as shown in Figure 4A and further having a lithograph layer so that it would be a single wall **80** but with the lithograph layer replacing the first liner layer **84**. Thus, the preferred front section **12** would include a flute layer, a liner attached to one side of the flute layer, and a lithograph layer attached to the flute layer opposite the liner.

[0037] The display can further include other features. One feature can be a transparent film or lamination on the surface of the lithograph layer of the top portion for protection. Another feature is a metal plate (not shown) secured on the top portion or bottom portion with an opening through the top portion so that the metal plate is visible on and flush with the top portion. The metal plate can be used for tear-away paper advertisements that include a magnet on the back portion of the advertisement that can attach to the metal plate. Another feature of the display can be a pocket for use in holding advertisement literature. Figure 7 shows a pocket **120** on the front portion **12** of the display **10**. The pocket **120** can be attached to the display **10** by any known attaching means such as tabs, glue, and tape. Preferably, the pocket **120** includes tabs (not shown) that can be inserted into slits on the front and back portions of the display to secure the pocket to the display **10**.

[0038] The pocket **120** can be machined as a part of the back portion of the display so that the pocket is flat and flush with the back portion during the unassembled state. Figure 8 shows the back portion **20** of the display **10**. The back portion **20** includes the pocket **120** in a flat position on the back portion **20**. The pocket **120** is perforated along its edges for easy removal. The pocket **120** can then be removed from the back portion **20**, folded, and attached to the front portion **12** as shown in Figure 7.

[0039] The preferred method of making the display is as follows. For the top portion, corrugated material is machined to form a flute. The flute is then attached to a liner on one side of the flute. A lithograph layer is also attached to the flute opposite the liner. The lithograph layer includes graphics and text. The top portion can be cut once the flute and liner are attached

prior to the attachment of the lithograph layer. Alternatively, the top portion can be cut once the liner, flute, and lithograph layer are attached. The bottom portion is similarly formed although a second liner is attached to a flute instead of lithograph paper as with the top portion. The top and bottom portions can be attached in a continuous process or can be attached in distinct separate steps. Preferably, the top and bottom portions are attached in a way so that the flutes in the respective top and bottom portions are nonparallel.

[0040] In use, the four tabs **30, 40, 50** and **60** provides a spring biasing force between the tire and the display insert to provide secure support. Tabs **30, 40, 50** and **60** are bent along scored edges **31, 41, 51** and **61**, respectively so that tabs **30, 40, 50** and **60** protrude outwardly away from the front panel section **20**. The tire insert **10** is then inserted into the central opening of a tire so that tabs **30, 40, 50** and **60** hold the tire insert **10** in place on the tire. Tabs **30, 40, 50** and **60** also allow the display insert to be used in variably sized tires.

[0041] Figures 9 and 10 show an alternate display insert **10**. Figure 9 shows the display insert **10** including a front panel section **12**, a first side panel section **11** and a second side panel section **13**. The first and second side panel sections **11, 13** are connected along a portion of their edges to the front panel **12**. Figure 10 shows the first and second side panel sections **11, 13** can be folded back and attached to the front panel **12** to form the assembled display insert **10**. The entire display insert **10** is formed of a single unitary piece, which can later be manipulated to form the desired shape. Each of the feet **20** defines a slit **22** with respect to the panels **14, 16**. As such, each foot has two straight edges **24** and a curved edge **26**. Further, indented fold line **28** is utilized so that the plurality of feet **20** may be resiliently deformable to fit any tire size.

[0042] The invention has been described with reference to the preferred embodiment. Obviously, modifications and alterations will occur to others upon a reading and understanding of this specification. Any of the variables disclosed herein can readily be determined and controlled without departing from the scope of the invention herein disclosed and described. Moreover, the scope of the invention shall include all modifications and variations that fall within the scope of the attached claims.